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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,783	10/10/2006	Oddvard Johnsen	JOHN-002 (ODD-01)	4516
66/935 7590 06/09/2010 Edmonds Nolte, PC 16815 ROYAL CREST DRIVE SUITE 130 HOUSTON, TX 77058				
EXAMINER FIGUEROA, JAIME				
ART UNIT		PAPER NUMBER		
3664				
MAIL DATE		DELIVERY MODE		
06/09/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,783

Applicant(s)

JOHNSEN, ODDVARD

Examiner

Jaime Figueroa

Art Unit

3664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Receipt is acknowledged of Applicant's arguments / remarks filed on October 23, 2009, claims 1 - 20 are pending and an action on the merits is as follows.

Applicant's arguments with respect to claims 1 - 9 have been fully considered but are moot in view of the new ground(s) of rejection.

It is noted that applicant has amended claims 1 - 9, and added claims 10 - 20.

The rejection of claim 3 under 35 U.S.C. 112, second paragraph, has been withdrawn in light of the amendment.

The rejection of claims 8 and 9 under 35 USC 101, as being directed to non-statutory subject matter has been withdrawn in light of the amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudd III (US 2004/0220714).

Regarding claim 1, (Currently Amended) Rudd discloses a brake control system for a wheel of a vehicle in motion (Brake Control System) comprising:

a) an accelerometer attached to the vehicle and configured to measure a deceleration of the vehicle and output a deceleration signal (see fig. 1: wheel speed sensors Ws 118 input the signal to acceleration controller 108);

b) a brake pressure sensor configured to output a brake pressure signal (see fig. 1: pedals 102 input the signal PDL r/l 120 and signal ABS 122 from brakes); and

c) a brake controller (fig. 1: controller 100) configured to:
receive a plurality of deceleration signals from the accelerometer
and calculate a change in measured deceleration over time (see fig. 5 and see fig. 1: deceleration module having signals 104);

receive the brake pressure signal and calculate a change in an applied brake pressure (see fig. 5 and see fig. 1: signal from brake ABS 122); and
calculate a brake pressure adjustment signal using the calculated change in measured deceleration and the calculated change in applied brake pressure (see fig. 5 and see fig. 1: generating Pout output pressure signal to control braking).

Regarding claim 2, the method steps are obviously performed by the usage of Rudd III system / apparatus as discussed above in claim 1.

Regarding claims 4 and 7, (Currently Amended) Rudd III discloses the system / method of claims 1 and 2, wherein the vehicle is an aircraft [0001].

Regarding claims 5 and 8, (Currently Amended) Rudd III discloses the system / method of claims 1 and 2, wherein the wheel brake is an automatic brake (auto brake system ABS 122) [0045].

Regarding claims 6 and 9, (Currently Amended) Rudd III discloses the system / method of claims 1 and 2, wherein the wheel brake is a manual brake (pedal brake input from operator-controlled braking) [0015].

Regarding claims 11, 13 and 15, (New) Rudd III discloses the system of claim 1, wherein the measured deceleration is a vehicle **longitudinal acceleration**, lateral acceleration, or vertical acceleration (Examiner notes that Rudd III uses the measurement of the linear speed of the wheels being equivalent to the longitudinal speed and is transformed in terms of acceleration/deceleration) [0043].

Regarding claim 14, (New) Rudd III discloses the system of claim 1, wherein the brake controller is further adapted output deceleration data to a **data storage file** or a display (Rudd III uses a storage media) [0054].

Regarding claims 17 and 20 (New) Rudd III discloses the method of claim 2, wherein brake pressure applied to the wheel is reduced by a predetermined pressure increment [0082]; wherein the brake pressure to the wheel is increased incrementally [0082].

Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudd III (US 2004/0220714) in view of Murphy (US 5,951,122).

Regarding claims 3 and 10, (Currently Amended) Rudd III discloses the method / system of claims 2 and 1. Rudd III is silent to disclose, wherein the measured deceleration is computed as a vector equal to a hypotenuse in a right-angle triangle

where longitudinal and lateral acceleration are equal to sides adjacent to the right-angle of the triangle.

Murphy teaches the measured deceleration is computed as a vector equal to a hypotenuse in a right-angle triangle where longitudinal and lateral acceleration are equal to sides adjacent to the right-angle of the triangle (see col. 8, lines 29-42).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide Rudd III with the teachings of Murphy, since such a combination will provide Rudd III the benefit of calculating a braking deceleration as a vector using the Pythagoras's evaluation.

Claims 12, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudd III (US 2004/0220714) in view of Cleary (US 4,454,582).

Regarding claims 12 and 16, (New) Rudd III discloses the system of claim 1. Rudd III is silent to disclose, wherein the brake controller is further adapted to determine a maximum braking capability of the vehicle using the measured deceleration of the vehicle.

Cleary teaches the brake controller is further adapted to determine a maximum braking capability of the vehicle using the measured deceleration of the vehicle (col. 4, line 38 to col. 6, line 6).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide Rudd III with the teachings of Cleary, since such a

combination will provide Rudd III the benefit of detecting the aircraft braking capability in order to stop the aircraft by the time the end of the runway is reached.

Regarding claims 18 and 19 (New) Rudd III discloses the method of claim 2.

Rudd III is silent to disclose wherein the measured deceleration of the vehicle represents information about optimal braking capability of the vehicle when the calculated change in measured deceleration becomes negative and the calculated change in measured brake pressure applied to the wheel is greater than or equal to zero; and further comprising measuring velocity of the vehicle, and applying the brake pressure to the wheel only when velocity is greater than zero (col. 4, line 38 to col. 6, line 6).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide Rudd III with the teachings of Cleary, since such a combination will provide Rudd III the benefit of detecting the aircraft braking capability in order to stop the aircraft by the time the end of the runway is reached.

Response to Arguments

In the Applicant's arguments filed on October 23, 2009, with respect to the rejections of claims 1 - 9 under 35 USC 102(b) as being anticipated by Zierolf (US 6,178,370) and under 35 USC 103(a) as being unpatentable over Zierolf (US 6,178,370), have been fully considered but are moot in view of the new ground(s) of rejection.

References are to be interpreted as by one of ordinary skill in the art rather than as by a novice. See MPEP 2141. Therefore, the relevant inquiry when interpreting a

reference is not what the reference expressly discloses on its face but what the reference(s) would teach or suggest to one of ordinary skill in the art. Furthermore, the Applicant is kindly invited to consider the above ground of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaime Figueroa whose telephone number is (571)270-7620. The examiner can normally be reached on Monday-Friday, 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi H. Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jaime Figueroa/
Examiner, Art Unit 3664
/KHOI TRAN/
Supervisory Patent Examiner, Art Unit 3664